

This application claims priority based on provisional application 60/395994 filed 07/16/03

MODULAR PLANT SUPPORT SYSTEM

BACKGROUND OF THE INVENTION

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Field of the Invention

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The present invention relates generally to staking devices used for supporting plants or sheltering them against snow or other adverse conditions and, more particularly, to a type of turf staking device which is capable of being secured in a laterally extending fashion by the interlocking of several relatively identical discrete components to form an elaborate structure from which plants can be attached to.

Description of the Prior Art

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Staking devices used for supporting plants are well known in the art and run from the most basic use of sticks or posts to more elaborate structures of cross beams, horizontal ropes or strings between posts to tie down plants.

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Amongst the various prior art of record are patents 5,881,495 by Clark, 4,922,653 by Stone and 3,638,814 by Lowery. These patents describe networks of interconnecting pipes or sticks that form structures. These structures can also be used as conduits for water, thus serving as watering devices as well as supporting devices.

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More specifically, patent 495 describes a turf stake onto which can be secured simple two dimensional structures very much similar to plumbing pipes, which makes sense since water is meant to run through the structure. The stakes can also serve as support for a variety of accessories such as a can holder or even an arrows holder.

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Patent 653 describes a three dimensional structure also meant for watering but which provides complete surrounding of the plant. A liquid poured in at least one of the stakes can run through the pipes to other stakes and into the soil.

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Patent 814 describes flexible crossmembers that can be bent into a variety of shapes to surround a plant.

However, none of the prior art provides for the flexibility of construction of the present invention.

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SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a plant support system which is adapted for ensuring substantial peripheral support of the plant.

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It is also an object of the present invention to provide a plant support system having modular sections that are easily adaptable for accommodating generally all plant sizes, vertically as well as horizontally.

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It is another object of the present invention to provide a framework around which sheets of covering material can be securedly attached as a way to shelter the plants against the elements.

5 It is a further object of the present invention to provide a plant support system that is economical, versatile and practical even with all its advantages and possibilities.

In order to achieve this, the invention is comprised of a modular stake comprised of three elements : a tip, a rod and a connector and the manner by which these three
10 basic elements cooperate allows for quasi infinite combinations and permutations of shapes and structures.

The foregoing and other objects, features, and advantages of this invention will become more readily apparent from the following detailed description of a preferred
15 embodiment with reference to the accompanying drawings, wherein the preferred embodiment of the invention is shown and described, by way of examples. As will be realized, the invention is capable of other and different embodiments, and its several details are capable of modifications in various obvious respects, all without departing from the invention. Accordingly, the drawings and description are to be regarded as
20 illustrative in nature, and not as restrictive.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT

Figs. 1 a, b illustrate 2 side elevations of the modular plant support system.

Fig. 1c illustrates a side elevation of an alternate tip.

Figs. 2 a, b illustrate top views of the stakes and the connectors.

5 **Figs. 3 a-d** illustrate two side elevations of the tip and two side elevations of the lower part of the stake into which the tip is inserted.

Fig. 4 shows a side elevation of a longitudinal arrangement of the stakes.

10 **Fig. 5** shows an alternate side elevation of a longitudinal arrangement of the stakes.

Fig. 6 shows a perspective view of a three dimensional arrangement of the stakes.

15 **Fig. 7** is a perspective view showing longer stakes set in a vertical arrangement as well as a crisscrossing "roof" arrangement.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

20 A modular plant support system **10** as viewed in **Figs. 1ab** is comprised of a separate tip **12**, a stake **14** and a connector section **16**. The modular plant support system **10** could have a round stake **14** as per **fig. 1a** or a square stake **14** as per **fig. 1b**.

Figs. 3ab show two side elevations of the generally conically shaped tip **12**, although

it could be triangular in shape without departing from the scope of the invention and which releasably connects to the lower end of the stake **14**. Any one of several means can be used for connecting the tip **12** with the stake **14** without departing from the scope of the invention. One means is by way of two generally arrow shaped clips **18** which engage suitably configured and sized notches **20** hollowed out into the stake **14**. Alternatively, an integrated tip **12'** can be formed integrally from the stake **14** itself as in **fig. 1c**.

The stakes **14**, which come in different lengths are topped by a connector section **16**, which is generally but not necessarily fixedly attached to the stake **14**. The connector **16** and the stake **14** could be releasably attached using various means known in the art without departing from the scope of the present invention.

The connector section **16** is hollow and allows for additional stakes **14** to be inserted into its top as per **FIGS. 4** through **7** and has a plurality of aligned holes **22** grouped in pairs, also for inserting other stakes **14** therethrough. By using these two methods of insertion, one can build a variety of structures. The stakes **14** can be inserted end to end as per **FIG. 4** or staggered as per **fig. 5** or to form square or rectangular shapes as per **FIG. 6**. They can also be stacked vertically as per **FIG. 7** so that they can produce a vertical structure. It should be noted that the stakes can come in different lengths. Also when two sticks are crisscrossed and tied together by a tying means, they can create a roof like structure as shown in **FIG. 7**, this can be practical for protecting bushes in the winter time by first creating a structure around the bush and then wrapping the structure in burlap or any other such material for that purpose.